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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,980	12/06/2001	Thomas H. Baum	260-CIP-DIV	5984
25559	7590	03/23/2005	EXAMINER	
ATMI, INC. 7 COMMERCE DRIVE DANBURY, CT 06810			TALBOT, BRIAN K	
			ART UNIT	PAPER NUMBER

1762

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/008,980	Applicant(s) BAUM ET AL.	
	Examiner Brian K Talbot	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-26 and 33-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 33-36 is/are allowed.
- 6) ☒ Claim(s) 1-4,7,13-22,26 and 37-39 is/are rejected.
- 7) ☐ Claim(s) 5,6,9-12 and 23-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/29/04</u>
<u>3/26/04</u> | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/26/04 has been entered.
2. Claims 8,27-29 and 32 have been canceled. Claims 33-39 have been added. Claims 1-7,9-26 and 33-39 remain in the application.
3. It is noted that claims 30 or 31 were never present in the application (see non-compliant and applicant's response). In response to this issue, Applicant is required, per rule 37 CFR 1.126, to renumber the claims in consecutive order so as to preserve the numbering throughout the prosecution. Hence, claims 32-39 should be renumbered as claims 30-37 so as to keep the consecutive numbering intact. The Examiner apologizes for this oversight and appreciates Applicant's cooperation in settling the matter.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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5. It is noted in the remarks filed 12/29/03, claims 5,9, 11 and 23, have been rewritten in independent form as claims 33-36 to overcome the objection as being dependent upon a rejected base claim. However, it is also noted that claims 5,9,11 and 23 have not been canceled and hence the claims are duplicates and must be cancelled in response to this Office Action (see 35 USC 112 rejection below).

Claim Rejections - 35 USC § 112

6. Claims 3,5,9,11²¹ and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 5,9,11 and 23, the claims are not further limiting and are duplicates of newly added claims 33-36. The claims are required to be canceled.

With respect to claim 3²¹, the Examiner questions how the iridium formed is elemental when the film is deposited in an oxygen atmosphere. Wouldn't this form an iridium oxide film? Clarification is requested.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,2 and 4,13,16-20,22,26 and 37-39 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Nakabayashi et al. (6,271,077).

Nakabayashi et al. (6,271,077) teaches coating an iridium film by CVD in a hydrogen and/or oxygen atmosphere. Iridium oxide is formed when the atmosphere is oxygen. The iridium precursor is $\text{Ir}(\text{DPM})_3$ or $\text{Ir}(\text{acac})_3$ (col. 25, line 40 – col. 30, line 55). Iridium films can be used in capacitor manufacture with deposition of ferroelectric films such as strontium titanate (SrTiO_3), PZT and SBT.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 7,14,15,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayashi et al. (6,271,077).

Nakabayashi et al. (6,271,077) fails to teach forming elemental iridium, utilizing air as the oxygen atmosphere and critical dimension of film.

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With respect to the claims being elemental iridium, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation in controlling the atmosphere to produce the desired final product which would include small enough oxygen in the atmosphere to produce an elemental film v. an oxide film.

With respect to the claims requiring air as the oxygen atmosphere, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar results regardless of the "type of oxygen atmosphere" utilized. It is well known in the art to utilize air atmosphere's to form metal oxide films. This would be dependent upon the desired final product.

With respect to the claims requiring critical dimension of the film, it is the Examiner's position that the critical dimensions of the final product are a "result effective variable" which is optimized by one skilled in the art depending upon the desired final product.

Allowable Subject Matter

9. Claims 33-36 are allowed.

10. Claims 6, 10, 12, 24 and 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. It is noted that the claims from which these depend upon have now been re-written as claims 33-36 (see above) and should be dependent upon them and not duplicate claims 5, 9, 11 and 23.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 2/23/05

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT